

IT IS CLAIMED:

1. A system for serving content residing on an Internet protocol (IP) network to a plurality of wireless client devices in a wireless service area, comprising:

at least one wireless gateway for wirelessly connecting said plurality of wireless client devices to said IP network, said wireless gateway converting between wireless signals and IP packets, wherein each IP packet includes a header specifying a transport protocol, and a destination IP address;

a plurality of content applications, each under a given application protocol, for providing content accessible from said IP network, the content including a first type and a second type;

a content redirector associated with each content application for causing content of a second type to be served when a wireless client device attempts to access content of a first type.

2. A system as in claim 1, wherein said content of the first type includes content of general interest not necessarily specific to a given wireless service area in which a wireless device is operating.

3. A system as in claim 1, wherein said content of the second type includes content specific to a given wireless service area in which a wireless device is operating. ?

4. A system as in claim 1, wherein said plurality of content applications include Wireless Markup Language (WML) applications under the Wireless Application Protocol (WAP) and the associated transport protocol is User Datagram Protocol (UDP).

5. A system as in claim 1, wherein said plurality of content

applications include HyperText Markup Language (HTML) applications under the HyperText Transfer Protocol (HTTP) and the associated transport protocol is Transmission Control Protocol (TCP).

5                   6. A system as in claim 1, wherein said content redirector includes a packet modifier that modifies the destination IP address of packets originating from the wireless client device to point to a server hosting the content of the second type.

10                   7. A system as in claim 1, wherein the content redirector includes a packet modifier that modifies the Uniform Resource Locator of packets originating from the wireless client device to point to the content of the second type.

15                   8. A system as in claim 1, wherein the content redirector includes:  
a first packet modifier and a second packet modifier;  
said first packet modifier modifying the destination IP address of packets originating from the wireless client device to redirect the packets to said second packet modifier; and  
20                   said second packet modifier modifying the redirected packets such that content of the second type is served when a wireless client device originally attempted to access content of a first type.                   ? 112

25                   9. A system as in claim 8, wherein said second packet modifier modifies the Uniform Resource Locator of the redirected packets to point to the content of the second type.

30                   10. A system as in claim 1, wherein  
each wireless client device is associated with an identity number;  
and

said packet modifier incorporates into the IP packets originating from a wireless client its associated identity number.

5 11. A system as in anyone of claims 1-10, wherein the IP network includes the Internet.

12. A system as in anyone of claims 1-10, wherein the IP network includes a private segment not publicly accessible.

10 13. A method of serving content residing on an Internet protocol (IP) network to a plurality of wireless client devices in a wireless service area, comprising:

15 providing at least one wireless gateway for wirelessly connecting said plurality of wireless client devices to said IP network, said wireless gateway converting between wireless signals and IP packets, wherein each IP packet includes a header specifying a transport protocol, and a destination IP address;

providing a plurality of content applications, each under a given application protocol, for providing content accessible from said IP network, the content including a first type and a second type;

20 redirecting content associated with each content application such that content of a second type is served when a wireless client device attempts to access content of a first type. 7 ✓

25 14. A method as in claim 13, wherein said step of redirecting content includes modifying the destination IP address of packets originating from the wireless client device to point to a server hosting the content of the second type.

30 15. A method as in claim 13, wherein said step of redirecting content includes modifying the Uniform Resource Locator of packets

originating from the wireless client device to point to the content of the second type.

5 16. A method as in claim 13, wherein said step of redirecting content includes:

modifying the destination IP address of packets originating from the wireless client device to redirect the packets to a predetermined location; and

10 modifying the redirected packets at the predetermined location such that content of the second type is served when a wireless client device originally attempted to access content of a first type.

15 17. A method as in claim 16, wherein said step of modifying the redirected packets at the predetermined location includes modifying the Uniform Resource Locator of the redirected packets to point to the content of the second type.

20 18. A method as in claim 13, wherein each wireless client device is associated with an identity number; and the step of redirecting content includes modifying the packets originating from the wireless client device to incorporate the identity number associated with the wireless client device.

25 19. A wireless network, comprising:  
a private segment of an Internet Protocol (IP) network;  
a wireless gateway for wirelessly coupling one or more wireless device to said private segment of the IP network so as to convert between wireless signals and IP packets;  
a Wireless Application Protocol (WAP) gateway;  
an access server for providing the private segment of the IP network access  
30 to the Internet and to the WAP gateway; and

a secure connection through the Internet for providing a private link between said private segment of an IP network and said access server.

20. A wireless network, as in claim 19, further comprising:

5           a packet inspector for inspecting information contained in the IP packets ;  
               a set of encryption/decryption rules for prescribing encryption/decryption to  
               a IP packet based on the information contained in the IP packet; and  
               an encryption decryption engine for executing the encryption/decryption  
               accordingly.

10